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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/729,060	12/05/2003	Don A. Kubose	06299.18992	9163
24382	7590	12/19/2005	EXAMINER	
JOSEPH S. HEINO, ESQ. DAVIS & KUELTHAU, S.C. 111 E. KILBOURN SUITE 1400 MILWAUKEE, WI 53202-6613			MATZEK, MATTHEW D	
			ART UNIT	PAPER NUMBER
			1771	
DATE MAILED: 12/19/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/729,060

Applicant(s)

KUBOSE ET AL.

Examiner

Matthew D. Matzek

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-64 is/are pending in the application.
- 4a) Of the above claim(s) 1-32 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 33-64 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12/5/03
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Response to Arguments

1. Claims 1-32 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 10/5/2005.
2. Applicant's election with traverse of a charged nonwoven filter in the reply filed on 10/5/2005 is acknowledged.
3. Applicant argues that the method of making the nonwoven filter as asserted by Examiner in the aforementioned Restriction requirement would be difficult to do and would be much more expensive than the instantly claimed process. The argument fails to address Examiner's assertion that the instantly claimed can in fact be made via a different process. The cost and difficulty of creating the article by the process asserted by Examiner are not commensurate with the burden placed upon Examiner to restrict between the two instantly claimed inventions. Applicant also argues that the process provided by Examiner may affect charge stability and thereby change the performance characteristics, but has failed to provide evidentiary results to substantiate such an argument. Applicant's arguments have been found to not be persuasive.

The requirement is still deemed proper and is therefore made FINAL.

Specification

4. The abstract of the disclosure is objected to because of its length. Correction is required. See MPEP § 608.01(b). The current abstract contains 174 words. Abstracts are to contain 150 or fewer words.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 35 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 35 recites "or other low melting temperature fibers". It is unclear to Examiner as to what is meant by "low melting temperature fibers".

Examiner directs Applicant to use specific compositional language to distinctly claim the type of fibers that meet the intended application (i.e. thermoplastic, polymeric, polyurethane, etc.) rather than relying on relative properties of said fibers.

6. Claims 36, 42, 48, 54 and 60 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear to Examiner as to what is intended by the limitation "wherein fibers of 10-90% of polypropylene, including bi-component fibers, are used in the blend". Is the fiber blend to contain 10-90% pure polypropylene fibers or bi-component fibers consisting of 10-90% polypropylene? For examination purposes Examiner has interpreted the instant limitation to include a nonwoven comprising 10-90% polypropylene fibers or bi-component fibers of 10-90 weight percent polypropylene. Applicant is directed to clearly state the intended composition of the fibers.

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7. Claims 41, 47, 53 and 59 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The cited claims recite the limitation "micro-denier/fine-denier blend fibers", but the Specification offers no incite as to the denier necessary to create the instantly claimed product. For examination purposes Examiner has applied the definition of "microfiber" as provided by *The Dictionary of Fiber & Textile Technology* to require fibers of less than 1.0 denier per filament. This definition will be applied to the instant limitations of "micro-denier" and "fine-denier".

8. Claims 47, 53 and 59 are also rejected as they recite "coarse-denier fibers", but the Specification only offers a teaching for coarse-denier fibers to have a preferable diameter of 5 to 30 micron. The terms denier and diameter may not be used interchangeably as they possess different units (denier [=] mass/length and diameter [=] length). For examination purposes Examiner has applied the definition of "coarse-denier fibers" to require fibers of 1.0 denier and greater per filament.

9. Regarding claims 40, 46, 52, 58 and 64 the phrase "and the like" renders the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed (those encompassed by "or the like"), thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 33, 35-37 and 39-40 are rejected under 35 U.S.C. 102(b) as being anticipated by Dahringer et al. (US 5,726,107).

a. Dahringer et al. teach a nonwoven of electret fiber mixtures that comprise at least two different types of fibers and charge control agents (Abstract). The nonwoven may be formed via needle-punching (col. 5, lines 60-65). The fibers of the nonwoven may be polypropylene (col. 12, lines 16-21). The nonwoven mainly comprises fibers with 0.01 to 30% by weight of the invention being charge control agents (Abstract). This teaching provides for the applied article to comprise 70 to 99.99 weight percent polypropylene fibers. A number of charge control agents (charge treatment agents) may be applied to the fibers of the nonwoven fabrics including cationic amides (col. 12, lines 50-59).

b. Claim 39 is rejected as nonwoven fabrics may be mechanically consolidated (col. 6, lines 60-65) via heated calendaring (col. 8, lines 25-29) and so the fabric density, air permeability, and mean pore size can be controlled through heated calendaring and densification of the nonwoven sheets. Claim 40 is rejected as the applied invention meets the structural and compositional limitations set forth in claim 33 and as such can be formed into the instantly

claimed orientations. The linear density of the fibers of the applied nonwoven range from 0.018 to 27 denier (col. 4, lines 30-38). Examiner interprets this teaching to anticipate a blend of micro-denier/fine-denier fibers and coarse-denier fibers.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 34, 41-43, 45-49, 51-55, 57-61 and 63-64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dahringer et al. (US 5,726,107) in view of Kahlbaugh et al. (US 5,364,456).

a. Dahringer et al. teach a nonwoven of electret fiber mixtures that comprise at least two different types of fibers and charge control agents (Abstract). The nonwoven may be formed via needle-punching (col. 5, lines 60-65). The nonwoven article may also be needle-punched to other layer (col. 8, lines 37-42) providing it with greater stability or additional filtering capability. The fibers of the nonwoven may be polypropylene (col. 12, lines 16-21). The nonwoven mainly comprises fibers with 0.01 to 30% by weight of the invention being charge control agents (Abstract). This teaching provides for the applied article to comprise 70 to 99.99 weight percent polypropylene fibers. A number of charge control agents (charge treatment agents) may be applied to the fibers of the nonwoven fabrics

including cationic amides (col. 12, lines 50-59). The linear density of the fibers of the applied nonwoven range from 0.018 to 27 denier (col. 4, lines 30-38).

Examiner interprets this teaching to anticipate a blend of micro-denier/fine-denier fibers and coarse-denier fibers. Dahringer et al. is silent as to the creation of a multi-layered, graded density filter structure.

b. Kahlbaugh et al. teach filtration article that comprises a gradient depth filter system with multiple layers (col. 5, lines 42-46) that decrease in fiber size with depth (col.5, lines 7-10).

c. Since Dahringer et al. and Kahlbaugh et al. are from the same field of endeavor, (i.e. filters), the purpose disclosed by Kahlbaugh et al. would have been recognized in the pertinent art of Dahringer et al.

d. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to have made the article of Dahringer et al. into a multi-layer density graded filter. The skilled artisan would have been motivated by the desire to create a filter with an extended lifetime or relative long lifetime (col. 6, lines 44-49).

12. Claims 38 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dahringer et al. (US 5,726,107) as applied to claims 37 and 43 above, and further in view of Bond et al. (US 2002/0168912).

a. Dahringer et al. teach a nonwoven of electret fiber mixtures that comprise at least two different types of fibers and charge control agents (Abstract). The nonwoven may be formed via needle-punching (col. 5, lines 60-65). The

nonwoven article may also be needle-punched to other layer (col. 8, lines 37-42) providing it with greater stability or additional filtering capability. The fibers of the nonwoven may be polypropylene (col. 12, lines 16-21). The nonwoven mainly comprises fibers with 0.01 to 30% by weight of the invention being charge control agents (Abstract). This teaching provides for the applied article to comprise 70 to 99.99 weight percent polypropylene fibers. A number of charge control agents (charge treatment agents) may be applied to the fibers of the nonwoven fabrics including cationic amides (col. 12, lines 50-59). The linear density of the fibers of the applied nonwoven range from 0.018 to 27 denier (col. 4, lines 30-38).

Examiner interprets this teaching to anticipate a blend of micro-denier/fine-denier fibers and coarse-denier fibers. The invention of Dahringer et al. is silent as to the use of polyamide-epichlorohydrin (PAE).

b. Bond et al. teach needle-punched [0136] nonwoven webs comprising polypropylene fibers [0137] that may be used as filters [0138]. The fibers may comprise multiple components and may include wet strength resins such as polyamide-epichlorohydrin (PAE) [0062].

c. Since Dahringer et al. and Bond et al. are from the same field of endeavor, (i.e. filters), the purpose disclosed by Bond et al. would have been recognized in the pertinent art of Dahringer et al.

d. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to have made the article of Dahringer et al. with the wet strength resin of Bond et al. with the motivation to improve the

crosslinking ability of the polypropylene fibers of the filter [0062]. The invention of Bond et al. provides for a different motivation than Applicant for the inclusion of PAE into the nonwoven filter fabric, but the teaching still reads on the instantly claimed article as it would also serve as charge treatment to the polypropylene fibers.

13. Claims 50, 56 and 62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dahringer et al. (US 5,726,107) in view of Kahlbaugh et al. (US 5,364,456) as applied to claims 49, 55 and 61 above, and further in view of Bond et al. (US 2002/0168912). The inventions of Dahringer et al. and Kahlbaugh are silent as to the use of polyamide-epichlorohydrin (PAE).

a. Bond et al. teach needle-punched [0136] nonwoven webs comprising polypropylene fibers [0137] that may be used as filters [0138]. The fibers may comprise multiple components and may include wet strength resins such as polyamide-epichlorohydrin (PAE) [0062].

b. Since Dahringer et al. and Bond et al. are from the same field of endeavor, (i.e. filters), the purpose disclosed by Bond et al. would have been recognized in the pertinent art of Dahringer et al.

c. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to have made the article of Dahringer et al. with the wet strength resin of Bond et al. with the motivation to improve the crosslinking ability of the polypropylene fibers of the filter [0062]. The invention of Bond et al. provides for a different motivation than Applicant for the inclusion of

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PAE into the nonwoven filter fabric, but the teaching still reads on the instantly claimed article as it would also serve as charge treatment to the polypropylene fibers.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew D. Matzek whose telephone number is (571) 272-2423. The examiner can normally be reached on 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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PRIMARY EXAMINER